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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,464	02/28/2002	Erkki Yli-Vakkuri	016050-066	4988

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EXAMINER

LOPEZ, CARLOS N

ART UNIT PAPER NUMBER

1731

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/084,464	YLI-VAKKURI, ERKKI	
	Examiner	Art Unit	
	Carlos Lopez	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/27/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 4-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1 IDS</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 4-5 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4-5 have not been further treated on the merits.

Claim 1 is objected to because of the following informalities: typing error "carriages being (9) being" at line 8 of claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, and 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The terms "the last pre-heating station" and "the pre-bending station" lacks antecedent basis. Additionally, the 8th to last line of claim 1 reciting "from a station...therebelow", it is unclear to which station is being referred. Is it a cooling station, bending station or a preheating station? For examination purposes, any station is being considered.

Line 11 of claim 1, recites radiation heating elements (14) located in the preheating section. It is unclear if the bending section 4, having radiation heating elements 14, is also being considered as a preheating section since radiation heating elements 14 are not depicted in the drawings as being part of the preheating section.

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In claim 3 reciting "the station", it is unclear which station is being referred. Is it a cooling station, bending station or a preheating station? Additionally, it is unclear which radiation-heating element is being referred in claims 2 and 3. Is the radiation heating element of ceilings, bending station or below the floor 10? For examination purposes, any radiation-heating element or station is being considered.

In claim 3, reciting "radiation heating element are divided for resistance rod elements" is unclear what subject matter is sought to be patented. Are the claimed heating elements separate rods or substituted for rod elements? For examination purposes, the radiation heating elements are deemed as the heating elements positioned below the claimed floor and being resistance rods.

In claim 7, the terms "in the upstream", "the upper tier", "the application of forced convection receiving its thermal energy from glass panels", "the process of cooling", "the downstream stations", and "the lower tier" lack antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yli-Vakkuri et al (US 5,437,704). Yli-Vakkuri discloses a furnace for bending glass sheet. The furnace comprises an upper track 18 and lower track 19. The claimed

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upper tier and lower tier of successive mould carriages and front walls is deemed as mould wagons 9 moving bending moulds 11 from preheating sections 2 to bending sections 4 onto cooling stations 6. Each mould carriage 9 is separated by wall 9a. Additionally, it is deemed that mould carriages 9 are being moved intermittently in order to avoid bumping into each other (See Col.5, lines 9-11). The claimed radiation heating elements on the bending and preheating stations are deemed as heating elements 12 shown in figures 1 and 7. The claimed intermediate floor separating the pre-heating stations and/or stations below is deemed as the individual floors of each mould carriage 9 as best shown in figure 2, see also figure 7 which shows a floor separating the upper and lower tiers. The claimed lift mechanism is deemed as the lift mechanism 10 of Yli-Vakkuri. The bending moulds 11 define the claimed transmitting floor 10 and would be expected to have an open-structure in order for the bottom of the glass to be heated by air from pipe 13. Applicant is also referred to Col. 4, line 57, showing that convection heat comes through the floor clearly suggesting a transmitting floor.

As noted in Col.7, lines 38ff, additional heat radiators or resistors 12w may be supplied on the sidewalls of the furnace below the level of the edge of the glass to be heated. Yli-Vakkuri also notes that these additional resistors particularly aid in bending the corners of the glass sheet. As shown in figure 7 the radiating heating elements 12w are well below the bottom of the glass. Since the glass shown in figure 7 is being held by mould 11, which forms the claimed transmitting floor, it would be obvious to a person of ordinary skill in the art, at the time the invention was made, that the radiation heating

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elements 12w are below the transmitting floor and on top of the intermediate floor formed by the floor of each mold carriage 9 as instantly claimed.

As for claim 3, the rod resistors 12a can be separately switch on and off (Bridging Paragraph of Col. 7-8).

As for claims 6-7, it would be obvious to a person of ordinary skill in the art to provide resistors adjacent to the convectional blow boxes of the pre-heating stations of Yli-Vakkuri in order to aid in the pre-heating of the edges of the glass sheets as similarly taught by Yli-Vakkuri which provides heating resistors to aid in the bending of the glass sheet edges. Additionally, it would be obvious to use reflectors in order to concentrate the emitted radiation onto the glass.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of copending Application No. 10/458,203 ('203). Although the conflicting claims are not identical, they

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are not patentably distinct from each other because the claimed upper and lower tiers having mould carriages, front or back walls, radiation heating elements, intermediate floor, and lift mechanism are recited in claim 3 of '203.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 2-3 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of copending Application No. 10/458,203 ('203) in view of US 5,470,367. Claim 3 of '203 is silent disclosing the specifics of the heating element claimed. However, US 5,470,367 discloses that heating elements in the form of rod resistance elements, open resistances, arranged side by side and having individual heating effects on the glass provides the desired heating in a particular portion of the glass without moving the heating elements (Col. 1, lines 36ff and Abstract). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have provided the claimed heating elements as taught by US 5,470,367 in order to provide the desired heating in a particular portion of the glass without moving the heating elements.

This is a provisional obviousness-type double patenting rejection.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References A-E have been cited to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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